
KERRY OJAKIAN, Bronx Community College (CUNY)

Cops and Robber on the Hypercube

The game of "cops and robber" is a two player game, played on a graph, between some number of cops and a single robber. On the robber's turn, he may move to an adjacent vertex. On the cop's turn (under the standard rules), any number of them may move to adjacent vertices while the rest remain where they are. The cops win if they ever occupy the same vertex as the robber, while the robber wins if he can evade the cops indefinitely. The cop number of a graph is the fewest number of cops needed to guarantee a win for the cops. We determine the cop number of the hypercube for various versions of the game. This is joint work with David Offner.